REMARKS

1. Amendments to the Claims

Claims 2-5 and 8-19 are pending. Claims 1, 6, and 7 are herein cancelled. Claim 2 is amended to incorporate claim 1. The amendment to claim 2 is supported by the Specification at page 16, lines 2-22 and Figure 7. Claim 3 is amended to be independent. Support for the amendments to claim 3 can be found in the Specification at page 16, beginning at line 2, and Figure 7. Claims 8 and 9 have been amended to correct their dependency in view of the cancellation of claim 1.

New claim 20 has been added. Support for new claim 20 can be found in the originally filed claims and in Figures 1, 4, and 7. No new matter has been added

2. Information Disclosure Statement

The Examiner states that the CD reference (Kazuonon Ikeukuro et al.) was not considered because Applicant did not provide a publication date for the reference cited therein. Applicants submit that the reference was cited in the International Search Report, which included its publication date of 2004. Applicants respectfully request that the reference be considered.

3. Objections to the Claims

The Examiner objects to claims 6 and 7 as not further limiting the claims from which they depend. Claims 6 and 7 are herein cancelled. Applicants request that the Examiner withdraw the objection.

4. Claim rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejects claims 1-9 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner states that the claims are confusing because there are no limitations which require the presence of an indicator protein or an indicator protein being bound to an aptamer.

Applicants respectfully submit that the claims clearly define the structure of the invention, such that one of skill in the art would understand the metes and bounds of the claims. Specifically, the

claims recite that when the probe moiety does not bind to the target molecule, said aptamer moiety does not bind to thrombin and thrombin exhibits its activity, and when the probe moiety binds to the target molecule, said aptamer moiety binds to the thrombin and inhibits the enzyme activity of thrombin (claims 2 and 3), or vice-versa (claim 20). Thus, the claims require an indicator (thrombin), the activity of which changes when the probe moiety binds the target molecule.

With particular regard to claim 2, Applicants also point out that the probe moiety is located on the 3' side of the aptamer moiety, which requires that the probe moiety be located in a specific location compared to the aptamer moiety.

With regard to claim 3, Applicants point out that probe moiety of the aptamer-probe complex is is inserted into the sequence of the thrombin aptamer moiety. Thus, there is a specific location for the probe moiety in the claim.

Applicants submit that one of skill in the art would find these claims to be clear in view of the Specification and the knowledge in the art. Applicants request that the Examiner withdraw the rejection.

5. Claim rejections under 35 U.S.C. § 102

a. King

The Examiner rejects claims 1, 3-7, and 9 under 35 U.S.C. § 102(e) as being anticipated by King (U.S. 2005/0176940). Applicants respectfully traverse.

As a preliminary matter, Applicants note that claims 1, 6, and 7 have been cancelled rendering the rejection moot with regard to those claims.

With regard to claim 3 and its dependents, Applicants submit that King does not disclose an aptamer-probe complex where if the probe moiety is not bound to the target molecule, the

aptamer moiety does not bind to the indicator protein. Nor does King disclose an aptamer-probe complex where if the probe moiety is bound to the target molecule, the aptamer moiety is bound to the indicator protein. In fact, where King discloses thrombin binding, there is no indicator molecule at all. (See page 9, Example 3). Accordingly, Applicants submit that the Examiner has failed to establish that King teaches each element of the claimed invention. Applicants respectfully request that the rejection be withdrawn.

In addition, King does not disclose that the probe moiety (i.e., the cellular binding region) is inserted into the sequence of the thrombin aptamer moiety. Instead the "various binding regions/domains are preferably separated by at least partially duplex regions." (King, [0079]). Thus, the present invention is not anticipated by King.

Furthermore, in King, the thrombin binding region is not an indicator, but is instead a therapeutic agent. The additional regions which bind a cellular component or other materials are likewise not indicator regions. Accordingly, Applicants submit that the Examiner has failed to establish the indicator molecule of the claimed invention. Applicants respectfully request that the rejection be withdrawn.

b. Li

The Examiner rejects claims 1-7 and 9 under 35 U.S.C. § 102(e) as being anticipated by Li (U.S. 2005/0089864). Applicants respectfully traverse.

As a preliminary matter, Applicants note that claims 1, 6, and 7 have been cancelled rendering the rejection moot with regard to those claims.

With regard to claims 2 and 3, Applicants point out that Li again uses thrombin as a target and not as an indicator molecule. (Li, paragraph [0017]). Additionally, nothing in Li suggests that that the probe moiety (i.e., the cellular binding regions) is inserted into the sequence of the thrombin aptamer moiety.

Moreover, the aptamer of Li is bound to the indicator molecule when the target binding site is empty not when the target binding site is bound to the target. (See Li, paragraphs [0012] to [0014]). Thus, Li does not teach every element of the claimed invention.

Accordingly, Applicants submit that the Examiner has failed to establish that Li anticipates the invention. Applicants request that the rejection be withdrawn.

6. Claim rejections under 35 U.S.C. §103

The Examiner rejects claims 1 and 3-9 under 35 U.S.C. § 103 as being unpatentable over Stanton (U.S. 6690377). Applicants respectfully traverse.

As a preliminary matter, Applicants submit that claims 1, 6, and 7 have been cancelled, rendering the rejections moot with regard to those claims.

With regard to claim 3 and its dependents, Applicants submit that Stanton does not disclose an aptamer-probe complex where if the probe moiety is not bound to the target molecule, the aptamer moiety does not bind to the indicator protein. Nor does Stanton disclose an aptamer-probe complex where if the probe moiety is bound to the target molecule, the aptamer moiety is bound to the indicator protein. Accordingly, Applicants submit that the Examiner has failed to establish that Stanton teaches each element of the claimed invention. Applicants respectfully request that the rejection be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a three (3) month extension of time for filing a reply in connection with the present application, and the required fee of $555.00 is attached hereto.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Leonard R. Svensson Reg. No. 30,330 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____

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